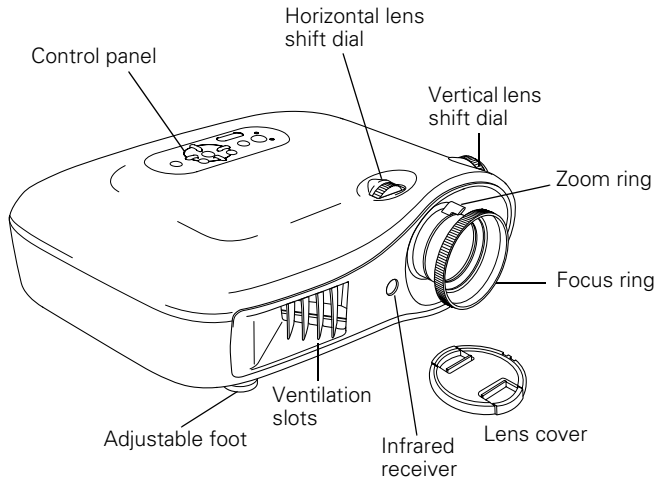
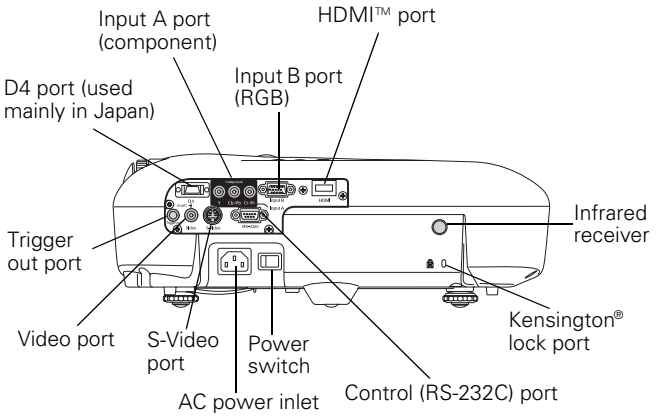
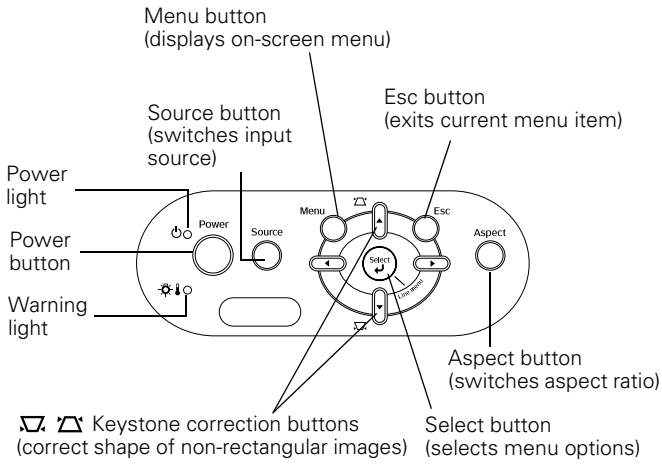
Projector Parts






Menu button (displays on-screen menu)
Source button (switches input source)
Esc button (exits current menu item)
Power light
Power button
Warning light
Aspect button (switches aspect ratio)
Keystone correction buttons (correct shape of non-rectangular images)
Select button (selects menu options)

Projector Specifications

General

Type of display	Poly-silicon Thin Film Transistor (TFT) active matrix
Size of LCD panels	Wide: 0.7 inches (18 mm)
Lens	F=2.1 to 2.8, f=21.4 to 31.7 mm
Zoom ratio	1:1.5
Resolution	1280 × 720 pixels (720p)
Brightness	1400 ANSI lumens max.
Dynamic contrast ratio	3000:1
Image size	30 to 300 inches (0.76 to 7.6 m)
Projection distance	2.9 to 44.8 feet (0.9 to 13.7 m) 16:9 3.5 to 54.8 feet (1.1 to 16.7 m) 4:3
Optical aspect ratio	16:9 or 4:3
Keystone correction angle	± 15° vertical
Noise level	32 dB (Dynamic color mode); 26 dB (Theater Black color mode)

Lamp

Type	UHE (Ultra High Efficiency), E-TORL
Power consumption	170 W
Lamp life	1700 to 3000 hours, depending on usage
Part number	V13H010L35

Remote Control

Range	30 feet (10 meters)
Battery	AA × 2

Dimensions

Height	4.9 inches (124 mm)
Width	16 inches (406 mm)
Depth	12.2 inches (309 mm)
Weight	11.5 lb (5.2 kg)

Electrical

Rated frequency	50/60 Hz
Power supply	100 to 120 V: 2.7 A 200 to 240 V: 1.2 A
Power consumption	Operating: 245 W max. Standby: 4 W

Environmental

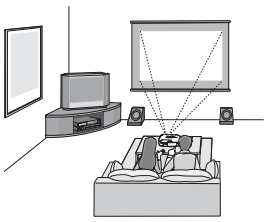
Temperature (non-condensing)	Operating: 41 to 95 °F (5 to 35 °C) Storage: 14 to 140 °F (–10 to 60 °C)
Humidity	Operating: 20 to 80% RH, non-condensing Storage: 10 to 90% RH, non-condensing
Operating altitude	7500 feet (2280 meters)

Safety

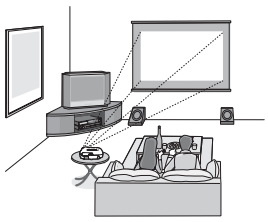
United States	FCC Part 15B Class B (DoC) UL60950 Third Edition
Canada	ICES-003 Class B CSA C22.2 No. 60950)

Positioning the Projector

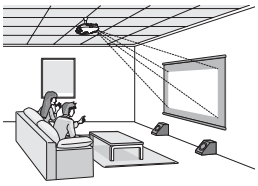
You can install the projector for these viewing setups:



Center



Side



Ceiling

When projecting from an overhead position, reorient the image by selecting the Front/Ceiling Projection option.

Image Size and Projection Distance

The maximum size of the image is determined by the distance from the projector's lens to the screen. Depending on how you use the Zoom and other settings, the actual size may be smaller.

16:9 Aspect ratio

Projection distance (wide to tele)	Maximum diagonal image size
2.9 to 4.4 feet	30 inches (26 × 15 inches)
3.9 to 5.9 feet	40 inches (35 × 20 inches)
5.9 to 8.9 feet	60 inches (51 × 28 inches)
7.9 to 11.8 feet	80 inches (71 × 39 inches)
9.9 to 14.8 feet	100 inches (87 × 47 inches)
20 to 29.8 feet	200 inches (173 × 98 inches)
30.1 to 44.8 feet	300 inches (260 × 146 inches)

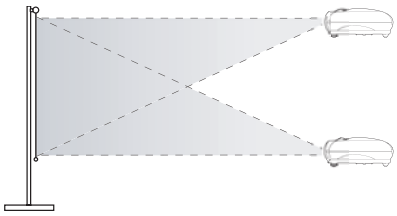
4:3 Aspect ratio

Projection distance (wide to tele)	Maximum diagonal image size
3.5 to 5.3 feet	30 inches (26 × 14 inches)
4.8 to 7.2 feet	40 inches (34 × 19 inches)
7.2 to 10.8 feet	60 inches (52 × 29 inches)
9.7 to 14.5 feet	80 inches (69 × 39 inches)
12.1 to 18.2 feet	100 inches (87 × 49 inches)
24.5 to 36.5 feet	200 inches (174 × 98 inches)
36.8 to 54.8 feet	300 inches (261 × 147 inches)

To determine the exact image size when you know the projection distance (or the exact projection distance when you know the desired image size), you can use the Projection Distance Calculator. You can download this program from the Epson website at http://support.epson.com.

Projecting a Square Image

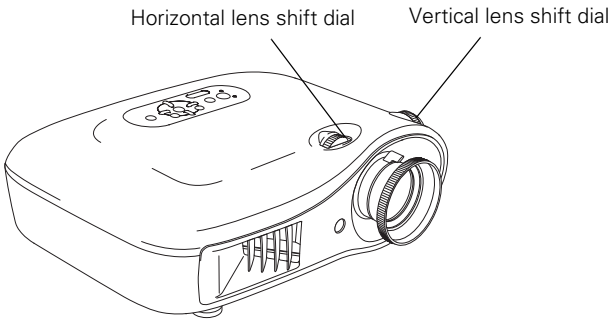
For best image quality, place the projector at a height where its lens is between the top and bottom of the screen. This lets you keep the projector level and use the vertical lens shift dial to position the image.



If you place the projector above or below screen level, you'll have to tilt it up or down to aim the image at the screen; this distorts (or "keystones") the shape of the image, but you can correct it using the projector's Keystone function (see page 6).

If you place the projector off to the side, aim it straight ahead (rather than at the center of the screen), then use the horizontal lens shift dial to center the image. Do not place the projector farther to the left or right than the edge of the screen, or you will not be able to project a square (or rectangular) image.

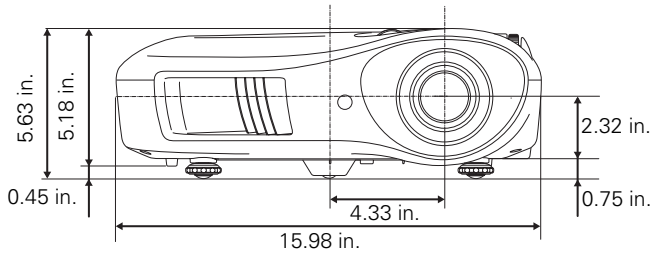
***Caution**: To adjust the lens position, make sure you use the lens shift dials. Do not try to move the lens manually, or you may strip the gears.*

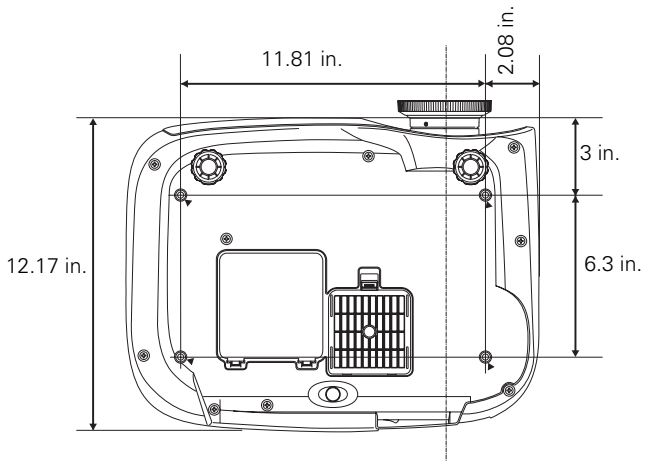


***Tip:** You can display a test pattern to help you center the image on the screen. Press the* Pattern *button on the remote control, then select* Display Position. *You can use the feet to correct the angle of the image if it's tilted.*

Installing the Projector

The illustrations below and in the next column show the dimensions of the projector:





To mount the projector on the wall or ceiling, you will need the optional projector mount designed for the projector. See page 11 for ordering information.

Follow the instructions included with the mount to install the projector, which weighs 11.5 pounds. The wall or ceiling where you install it must be capable of supporting a weight of 58 pounds.

If you are planning to use an AV controller with the projector, refer to the table of ESC/VP21 command codes below.

ESC/VP21 Command Codes

You can use an AV controller with a 9-pin null modem serial cable to control the projector. You can download the complete *ESC/VP 21 Communication Manual* for home theater projectors from the Epson website at http://support.epson.com. Following are some of the available codes:

Item		Command
Power ON/OFF	ON	PWR ON
	OFF	PWR OFF
A/V Mute ON/OFF	ON	MUTE ON
	OFF	MUTE OFF
A/V Mute selection	Black	MSEL 00
	Blue	MSEL 01
	User's Logo	MSEL 02

Item			Command
Source change	**Terminal**	**Signal name**	
	Input A	Input A	SOURCE 10
		YCbCr	SOURCE 14
		YPbPr	SOURCE 15
		Auto	SOURCE 1F
	Input B	Input B	SOURCE 20
		RGB	SOURCE 21
	Input 3 (HDMI)	HDMI	SOURCE 30
	Video	Cycles within SOURCE 4X	SOURCE 40
		Video (RCA)	SOURCE 41
		S-Video	SOURCE 42
	Input 5	D4	SOURCE C0
		YCbCr	SOURCE C4
		YPbPr	SOURCE C5
		Auto	SOURCE CF
Color Mode		sRGB	CMODE 01
		Theatre	CMODE 05
		Living Room	CMODE 06
		Natural	CMODE 07
		Dynamic	CMODE 08
		Theatre Black 1	CMODE 09
		Theatre Black 2	CMODE 0A
Aspect ratio		Auto	ASPECT 00
		Normal	ASPECT 20
		Squeeze	ASPECT 21
		Zoom	ASPECT 22
		Through	ASPECT 23
		Squeeze Through	ASPECT 24
		Wide	ASPECT 25

Cable Connections

You can connect up to five pieces of video equipment to the projector, using the ports listed below (cables are not included):

Port	Required Cable	Supported video formats
Video	RCA video cable	Analog TV (NTSC, PAL, SECAM)
S-Video	S-video cable	Analog TV (NTSC, PAL, SECAM)
Input A	Use a 3-connector component video cable. Select YCbCr (NTSC) or YPbPr (HDTV) as the Input Signal setting (see page 6)	Digital TV (SDTV and HDTV) Analog TV (NTSC, PAL, SECAM)
Input B	Mini D-sub, 15-pin monitor cable	RGB
HDMI	HDMI cable	Digital TV (SDTV and HDTV)

For best results, connect your video equipment to the HDMI (High-Definition Multimedia Interface) port. If your equipment doesn't support HDMI, connect it to one of the following ports (highest quality listed first): Input A (for component video), S-Video, or Video (composite video).

Making Other Connections

Depending on how you plan to use the projector, you may need to connect these additional cables:

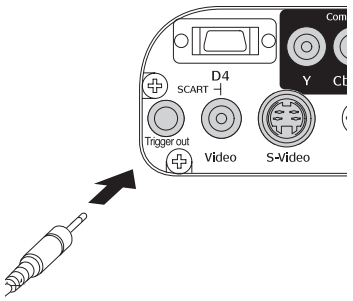
❏ Control (RS-232C)

Connect a computer or AV controller to this port.

❏ Trigger out port

This port outputs a 12-volt DC signal when the projector is turned on, and can be used to raise or lower a projection screen automatically.

❏ Connect a 3.5-mm mini jack to the port, as shown.



Compatible Video Formats

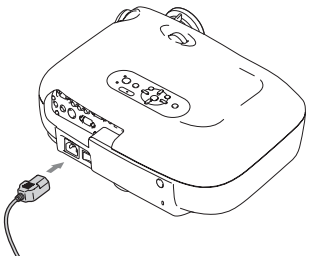
The projector supports NTSC, PAL, and SECAM, as well as the digital video formats listed below.

Digital video formats

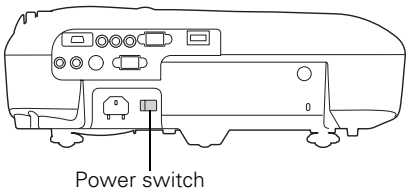
Format	Signal name	Resolution	Aspect ratio
SDTV	480i 480p 576i 576p	960 × 720 960 × 720 960 × 720 960 × 720	4:3 4:3 4:3 4:3
HDTV	720p 1080i	1280 × 720 1280 × 720	16:9 16:9

Turning the Projector On and Off

1. Connect the power cord to the projector and a grounded electrical outlet.



2. Remove the lens cap.
3. Turn on any connected equipment you plan to use.
4. Turn on the power switch on the back of the projector.



5. Press the On button on the remote control, or press the ⏻ Power button on the projector.

   The projector takes about 10 seconds to warm up. If you don't see an image, you may need to select the image source (see the next column).

Turning Off the Projector

1. Turn off any equipment connected to the projector.
2. Press the Off button on the remote control (or press the ⏻ Power button on the projector twice).
3. Let the projector cool for about 30 seconds.
4. Once the light stops flashing and stays on, turn off the power switch on the back.

Caution: *Turn the projector off when not in use. Continuous 24-hour-a-day use may reduce its overall life. Never unplug the projector without pressing the* Off *button and letting it cool, or you could damage it and reduce lamp life.*

Locking the Projector

You can lock the projector to prevent the image from being accidentally changed once it's adjusted, and to keep children from using the projector without adult supervision.

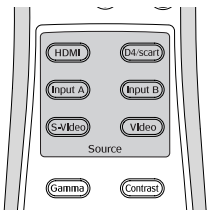
1. Press the Menu button on the projector or remote control.
2. Use the menu navigation buttons to open the Setting menu, then open the Operation menu.
3. Choose from these options:
   - ❏ Child Lock to disable the ⏻ Power button on the projector's control panel unless it is pressed for about 3 seconds.
   - ❏ Operation Lock to disable all the buttons on the projector's control panel. To operate the projector, you have to use the remote control.
4. Press Menu to exit the menu system. Turn off the projector to activate the Child Lock.

Basic Image Adjustments

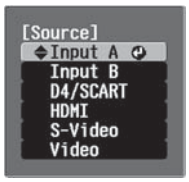
Once the projector is turned on, use these functions to adjust the image.

Selecting the Image Source

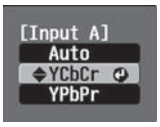
If you don't see the image you want, press the Source button on the projector or the button on the remote control that corresponds to the port to which your video equipment is connected.



If you press the Source button on the projector, you see a menu of available sources. Press the ▲ or ▼ button to highlight a source and press the ↵ Select button.



If you select the Input A source using either the remote control or the menu above, you may see the Input A menu:

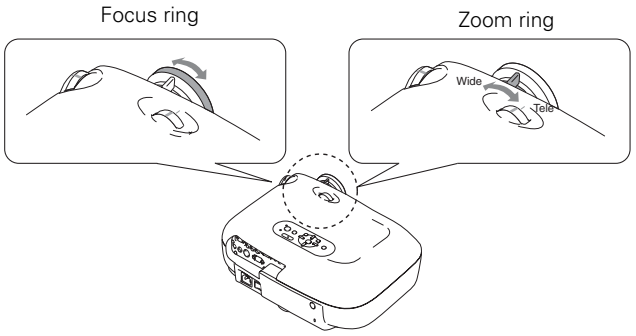


Press the ▲ or ▼ button to highlight YCbCr (for component video with an NTSC signal) or YPbPr (for component video with an HDTV signal), or select Auto so the projector can automatically detect the Input A source type. Then press the ↵ Select button.

Focusing and Zooming the Image

Sharpen or reduce the focus using the focus ring.

Zoom into or out of the picture using the zoom ring.



Correcting the Image Shape

If the projected image looks like ▱ or ▱, use the Keystone function to correct its shape.

***Note:** If the image is shaped like ▱ or ▱, the projector has been placed off to the side of the screen and angled toward it. Face the projector straight ahead (instead of at the center of the screen), then use the horizontal lens shift dial to center the image.*

To perform keystone correction, press the ▲ or ▼ button on the projector, or access the menu system as follows:

1. Press the Menu button on the projector or remote control.
2. Use the menu navigation buttons to open the Settings menu, then select Keystone.
3. Use the ◄ ► arrow buttons to adjust the shape of the image.
4. Press the Menu button when done.

Choosing the Color Mode

You can change the Color Mode to adjust the brightness, contrast, and color, letting you quickly optimize the image for various lighting environments.

1. Select the image source you want to adjust (a different Color Mode can be saved with each image source).
2. Press the Color Mode button on the remote control. Then choose from these settings:
   - ❏ Dynamic for projecting images with vivid color in brightly lit rooms.
   - ❏ Living Room for projecting images with vivid color under ordinary room lighting.
   - ❏ Natural for projecting in subdued lighting; increases contrast and makes flesh tones appear more natural.
   - ❏ Theatre for projecting in subdued lighting; enhances the appearance of movies with dark scenes.
   - ❏ Theatre Black 1 or 2 for projecting in fully darkened rooms.
   - ❏ sRGB for projecting computer images that conform to the sRGB color standard.

Choosing the Aspect Ratio

Depending on the port to which your equipment is connected, your image can be automatically sized to fit on the screen when Auto is selected as the Aspect setting. If the image doesn't fit the way you like, you may need to set the aspect ratio yourself.

Press the Aspect button, then choose from these settings:

- ❏ Normal for standard TV broadcasts, computer images, or images having a 4:3 aspect ratio.
- ❏ Zoom for images recorded in 16:9 (wide-screen) format.
- ❏ Wide if you want to expand a 4:3 image to 16:9 so it fills the whole screen. This stretches only the right and left sides of the image; the central part is unchanged.
- ❏ Squeeze for recordings made in a compressed (anamorphic) 16:9 format, sometimes called "Squeeze Mode."
- ❏ Through if your image is smaller than 1280 × 720 pixels and you want to display it at its original pixel size without resizing it to fit on the screen.
- ❏ Squeeze Through if your image is recorded in Squeeze Mode, is smaller than 1280 × 720 pixels, and you want to display it at its original pixel size.

When you select an Aspect setting, the resolution at which the image displays depends on the currently active picture source. The resolutions for all video formats and aspect ratio settings are listed below.

Analog TV, composite video, or S-video

	Aspect setting				
Format	**Normal (4:3)**	**Zoom (16:9)**	**Squeeze/Wide (16:9)**	**Through (4:3)**	**Squeeze Through (16:9)**
NTSC	960 × 720	1280 × 720	1280 × 720	596 × 446	794 × 446
PAL or SECAM	960 × 720	1280 × 720	1280 × 720	708 × 528	944 × 528

Digital component video

		Aspect setting					
Format	**Signal name**	**Normal**	**Zoom**	**Squeeze**	**Wide**	**Through**	**Squeeze Through**
SDTV	480i 480p 576i 576p	(4:3) 960 × 720 960 × 720 960 × 720 960 × 720	(16:9) 1280 × 720 1280 × 720 1280 × 720 1280 × 720	(16:9) 1280 × 720 1280 × 720 1280 × 720 1280 × 720	(16:9) 1280 × 760 1280 × 760 1280 × 760 1280 × 760	(4:3) 596 × 446 596 × 446 708 × 528 708 × 528	(16:9) 794 × 446 794 × 446 944 × 528 944 × 528
HDTV	720p 1080i	(16:9) 1280 × 720 1280 × 720	— —	— —		(16:9) 1176 × 664 —	— —

Digital RGB video

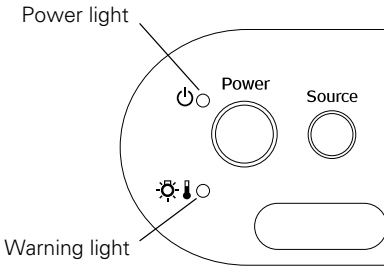
		Aspect setting					
Format	**Signal name**	**Normal**	**Zoom**	**Squeeze**	**Wide**	**Through**	**Squeeze Through**
SDTV	480i 480p 576i 576p	960 × 720 960 × 720 960 × 720 960 × 720	1280 × 720 1280 × 720 1280 × 720 1280 × 720	1280 × 720 1280 × 720 1280 × 720 1280 × 720	1280 × 720 1280 × 720 1280 × 720 1280 × 720	640 × 480 640 × 480 768 × 576 768 × 576	853 × 480 853 × 480 1024 × 576 1024 × 576
HDTV	720p 1080i	1280 × 720 1280 × 720	— —	— —	— —	1280 × 720 —	— —

Computer monitor formats (analog RGB)

	Aspect setting					
Format (4:3)	**Normal**	**Zoom**	**Squeeze**	**Wide**	**Through**	**Squeeze Through**
VGA	960 × 720	1280 × 720	1280 × 720	1280 × 720	640 × 480	853 × 480
VESA	960 × 720	1280 × 720	1280 × 720	1280 × 720	640 × 480	853 × 480
SVGA	960 × 720	1280 × 720	1280 × 720	1280 × 720	800 × 600	1066 × 600
XGA	960 × 720	1280 × 720	1280 × 720	1280 × 720	—	—
SXGA	960 × 720	1280 × 720	1280 × 720	1280 × 720	—	—
WXGA	1280 × 720	1280 × 720	1280 × 720	—	—	—
MAC13 inch MAC16 inch MAC19 inch	960 × 720 960 × 720 960 × 720	1280 × 720 1280 × 720 1280 × 720	1280 × 720 1280 × 720 1280 × 720	1280 × 720 1280 × 720 1280 × 720	640 × 480 832 × 624 —	853 × 480 1109 × 624 —

Projector Status Lights

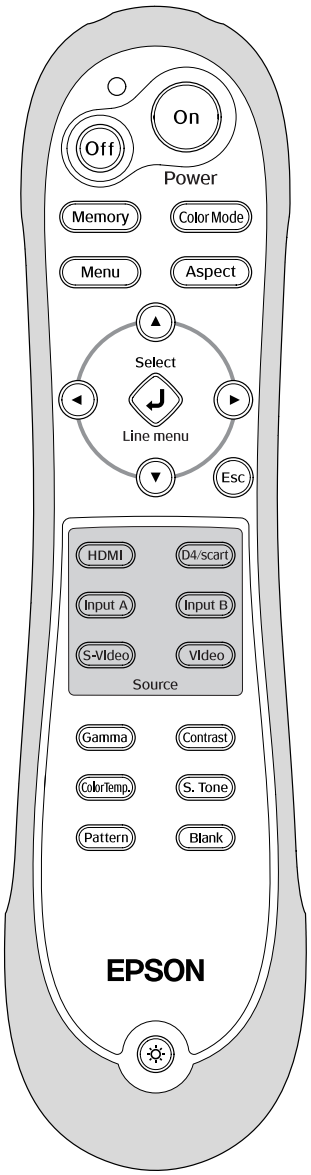
If your projector isn't working correctly, first turn it off, wait for the warning light to turn a steady orange, turn off the power switch on the back, and unplug it. Then plug the power cord back in and turn on the projector. If this doesn't solve the problem, check the lights on top of the projector. They alert you to possible problems.



Light	Status	Action
⏻	off	Make sure the power switch on the back of the projector is turned on and the power cable is connected securely at both ends.
⏻	orange	The projector is in standby mode. You can turn off the power switch on the back to turn off the projector or press the ⏻ **Power** button to turn it on.
⏻	flashing green	The projector is warming up. Wait about 30 seconds for a picture to appear.
⏻	green	The projector is operating normally.
⏻	flashing orange	You've turned off the projector and it's cooling down. Wait until the light stops flashing, then turn off the power switch in back (or press the ⏻ **Power** button to turn it back on).
🔆 🌡	flashing orange	High-speed cooling is in progress. If the projector gets too hot again, projection stops automatically. Make sure there is plenty of space around and under the projector and nothing is blocking the air filter. If it continues to overheat, clean the air filter; see instructions at right.
🔆 🌡	red	The projector is too hot and the lamp has turned off. Wait 5 minutes, then turn it back on. Make sure there is plenty of space around and under the projector and nothing is blocking the air filter. Clean or replace the air filter if necessary. If you are using the projector at an altitude above 4900 feet, turn on High Altitude Mode.
🔆 🌡	flashing red (half-second intervals)	The lamp needs to be replaced. Make sure you have a spare lamp handy.
🔆 🌡	flashing red at 1-second intervals	There is an internal problem. Turn off the power switch on the back of the projector and unplug it. Then conatct Epson for assistance.

Remote Control and IR Codes

Following is an illustration of the remote control, along with the IR codes that correspond to the remote control buttons:

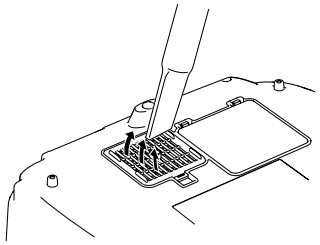


Function	Hex code
Power on	90h
Power off	91h
Memory	8Bh
Color Mode	8Fh
Menu	9Ah
Aspect	8Ah
Up	B0h
Down	B2h
Left	B3h
Right	B1h
Enter	85h
Esc	84h
HDMI	73h
D4/scart	7Eh
Input A	71h
Input B	9Dh
S-Video	9Ch
Video	70h
Contrast	2Ch
Color Temp.	2Dh
Skin Tone	2Ah
Pattern	96h
Blank	93h

Cleaning and Replacing the Air Filter

Clean the air filter on the bottom of the projector once every three months, or more often in dusty environments. If it's not cleaned periodically, it can become clogged, preventing proper ventilation. This can cause overheating and damage the projector.

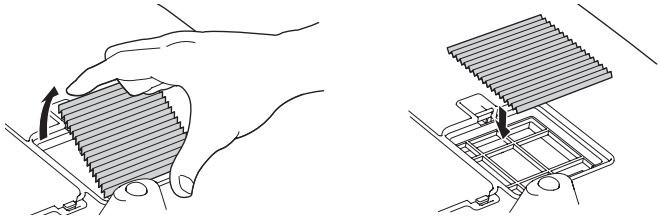
1. Press the ⏻ Power button and wait for the ⏻ power light to stop flashing.
2. Turn off the projector using the power switch on the back.
3. Unplug the power cord and disconnect any cables.
4. Turn the projector over.
5. Then use a small vacuum cleaner designed for computers and other office equipment to clean the filter. If you don't have one, gently clean the filter using a very soft brush, such as an artist's paintbrush.



If the dirt is difficult to remove or the filter is broken, replace it. Purchase part number V13H134A09 from an authorized Epson reseller.

6. If you need to replace the filter, release the tab and lift up the cover.

7. Remove the old filter and replace it with a new one.



8. To replace the cover, insert the tabs and press down until the cover clicks into place.

Replacing the Lamp

The projection lamp lasts from 1700 to 3000 hours, depending on usage. You can use the Info menu to check how long it's been in use. It's time to replace the lamp when:

- ❏ The projected image gets darker or starts to deteriorate.
- ❏ The projector's warning light flashes red at half-second intervals.
- ❏ The message Replace the lamp appears on the screen when you start projecting.

Note: *Lamp life results will vary depending on the selected mode, environmental conditions, and usage.*

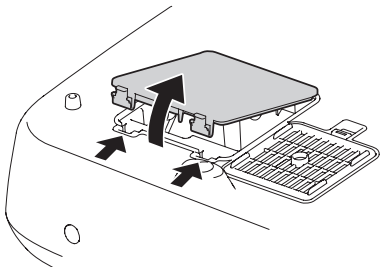
Purchase lamp part number V13H010L35 from an authorized Epson reseller.

Warning: *Let the lamp cool fully (about an hour) before replacing it. In the unlikely event that the lamp has broken, small glass fragments may be present and should be removed carefully to avoid injury.*

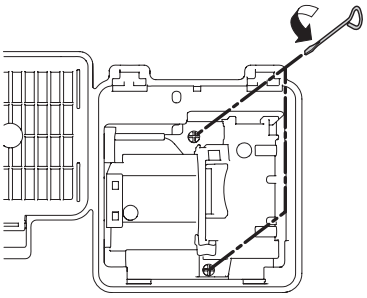
Caution: *Never touch the lamp with your bare hands; the invisible residue left by the oil on your hands may shorten the lamp life. Use a cloth or glove to handle the new lamp.*

Follow these steps to replace the lamp:

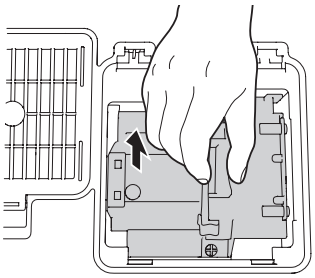
1. Press the ⏻ Power button and wait for the light to stop flashing.
2. Turn off the power switch on the back of the projector and unplug the power cord and any cables.
3. If the projector has been on, let it cool for about an hour.
4. Press in the latches securing the lamp cover and lift off the cover.



5. Loosen the two screws securing the lamp (they don't come all the way out).



6. Grasp the lamp as shown and pull it straight out.



Warning: *(Hg) The lamp(s) in this product contain mercury. Please consult your state and local regulations regarding disposal or recycling. Do not put in the trash.*

7. Gently insert the new lamp and tighten its screws.

Caution: *Don't touch the glass portion of the lamp assembly. Touching the glass could result in premature lamp failure.*

8. Replace the cover. (The projector won't work if the lamp cover is open or loose.)
9. Reset the lamp usage timer, as described in the next section.

Resetting the Lamp Timer

After installing a new lamp, you need to reset the timer so the projector can keep track of how many hours it has been used.

1. Press the Menu button on the projector or remote control.
2. Use the menu navigation buttons to open the Reset menu, then select Reset Lamp Hours.
3. When you see a confirmation prompt, highlight Yes and press the ↵ Select button.
4. When you're finished, press the Menu button to exit.

The lamp usage timer doesn't register until you've used the lamp for at least 10 hours.

Optional Accessories

Epson provides the following optional accessories:

Product	Part number
Replacement lamp (ELPLP35)	V13H010L35
Air filter replacement (ELPAF09)	V13H134A09
Projector mount	ELPHB550
Kensington security lock	ELPSL01
S-video cable	ELPSV01
Component video cable	ELPKC19

You can purchase accessories from an authorized Epson reseller. To find the nearest reseller, call 800-GO-EPSON (800-463-7766).

In the U.S., you can also purchase online at www.epsonstore.com.

In Canada, you can also purchase at www.epson.ca or (800) 807-7766.

Related Documentation

CPD-20566	*Epson PowerLite Cinema 550 User's Guide*
CPD- 20246	*Epson Extra Care℠ Home Service* warranty

Note: *Setup instructions are provided in the* User's Guide*. There is no setup sheet.*